

# THE IBIS.

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## FOURTH SERIES.

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X.—*Field-notes on the Birds of Celebes.* By A. B. MEYER, M.D., C.M.Z.S., Director of the Royal Zoological Museum, Dresden. Part II.

[Continued from p. 70.]

BRODERIPUS CELEBENSIS, Walden.

Native Malay name, "Burong-guning," *i. e.* "Yellow bird."  
Alfurous name in the Minahassa, "Kikeliawoi."

Very common. Minahassa, December till July; Limbotto, July; Togian Islands, August.

Iris red; feet bluish grey; claws black; bill rosy. Even the bones of this bird are yellow.

GEOCICHLA ERYTHRONOTA, Selater.

Five miles from Menado, on the way to Lotta, in February and March; at Tumumpat, near Menado, in March; in the churchyard of the Europeans at Menado from April to July.

Lives on the ground, very shy, only to be shot from far.

Iris of a dark slaty colour; feet nearly white.

Feeds on beetles, which I found in the stomach.

I wonder that Lord Tweeddale gave me credit for having got this bird, in his "Appendix" and not in his "List," seeing that

I had sent this species, and others for the first time, together with *Meropogon forsteni*, for which species he gives me credit in the "List." The same remark applies to *Ceycopsis fallax* and others.

TRICHOSTOMA CELEBENSE, Strickl.

Conceals itself in the interior of low bushes, and is therefore difficult to get.

MELANOPITTA FORSTENI (Bp.).

Native Malay name, "Mopo-idiau," *i. e.* "Green Grandfather" (explanation see below).

The bird is difficult to obtain, in consequence of its shyness, or perhaps from its being a rare bird. Several of the black-headed Pittas are not easy to procure, according to my experience, such as *P. sordida*, of the Philippine Islands, and also *P. novæ-guinææ*, of New Guinea; whereas *Pitta maxima*, of Hal-mahera, and *P. rosenbergi*, of Mysore, must be called common birds. Have the latter lost, or never acquired, shyness in consequence of freedom from enemies?

*M. forsteni* I found near Menado in December 1870, but later only once again in these regions, notwithstanding that I always had my eyes open for it. The following species is more frequent.

ERYTHROPITTA CELEBENSIS (Forsten).

Malay and Alfurous name in the Minahassa, "Mopo," *i. e.* "Grandfather."

Near Menado from January till July; Togian Islands, August; near Segeri, South Celebes, in September.

Although the red-breasted Pitta of Celebes is not so difficult to procure as the black-headed, it is nevertheless a bird which it is not easy to get a shot at, being very quiet in the daytime, and seldom calling except in the morning and evening its *tüüüüü tchui*. In the evening the cry *oppo* (origin of the native name) is heard, with which male and female call one another, the notes sounding melancholy and protracted. "Oppo" means, in the language of the country, "grandfather;" and the natives tell the tale, that once a child, which had gone

with its grandfather into the forest, got astray, was transformed into a bird, which now always calls for its grandfather.

*Pitta celebensis* only runs on the ground, and is very shy and watchful ; it glides noiselessly through the leaves ; and, as its back is green, it can only with difficulty be detected. To approach it one must creep through the densest brushes ; and without imitating the call of the bird its pursuit would be in vain. But if the hunter imitates the cry, he can draw the bird almost to the muzzle of his gun. During the daytime they go singly, in the evening in pairs together. The nest is to be found in brushes near small pools. The bird digs a hole in the slope of the river-bank, and builds its nest therein of wood and leaves, lined with cotton or hairy plant-materials (for instance, from *Arenga saccharifera*, Lab.). It lays two eggs. If the female sits on the eggs, the male watches in the neighbourhood, and it takes the place of the female when she goes for food. This *Pitta* feeds on beetles, small caterpillars, &c.

In the young bird the red is very pale, as also the other colours. In old individuals the red likewise is lighter, or perhaps before the moults. The male has much more brilliant colours than the female.

Iris greyish brown ; bill black ; feet greyish black.

(Compare also my notes in Rowley's Orn. Misc. vol. ii. p. 327).

GERYGONE FLAVEOLA, Cab.

I discovered this bird in January 1873 near Makassar, and also found it at Tello, some miles from Makassar. It is a lively little bird ; and its call is often heard, at least during that month. It calls about nine times one after another, beginning with the highest and ending with the deepest tone, in regular short intervals, very loud and often.

Iris, bill, feet, and claws black.

Dr. Cabanis described this new species in the Journ. f. Orn. 1873, p. 157.

BUDYTES VIRIDIS (Gm.).

Menado, March ; Limbotto, July ; Makassar, January.

Iris dark ; feet and claws blackish ; bill blackish grey.

*HIRUNDO GUTTURALIS*, Scopoli.

Menado, March ; Togian Islands, August ; Tello (South Celebes), January.

Iris brown ; feet, claws, and bill black.

In the stomach beetles.

Very active, but often rests on single branches of trees in the flooded rice-fields of Tello.

*HIRUNDO JAVANICA*, Sparrm.

Tello, near Makassar, in January.

*CYORNIS RUFIGULA*, Wall.

Near Menado in March.

*HYPOTHYMIS PUELLA* (Wall.).

Alfurous name in the Minahassa, "Rui" (its call).

Not rare near Menado from January till July ; Limbotto, July ; Togian Islands, August.

Feeds on insects (butterflies, spiders, &c.).

The male is of a more brilliant blue than the female, the latter more greyish. The nestling is grey, belly and breast white, head grey.

Iris blue ; it has large eyes ; feet blue, like the belly ; claws black ; bill blue, like the head ; even the bones are blue.

The nest is placed on twigs of trees, and made of moss &c. I got one, which is still in my collection (Dresden Museum), in March 1871, near Menado. It contained two young birds, one of which escaped. I put the nest back in its place, and observed that three old birds always remained near. They cried *tschirret, tschirret*, in their fright ; nay, they tried to attack me when I took the young one and put it down on another spot ; they followed and immediately brought food if it chirped. One of the three old birds I procured with the blowpipe ; it was a female ; but I cannot say whether the other two were both males, or a male and a female. All three had remained with the young one to feed it. This latter was still quite helpless.

The old birds call three times when they answer each other in play, and utter *rui, rui*, when they call each other.

ARTAMUS MONACHUS, Temm.

Native Malay name, "Maspas-utan" (utan = forest).

Only in the mountains of the Minahassa.

Feeds on insects, butterflies on the wing, grasshoppers, &c. Sits quiet on a tree till it has seen a prey, then rushes on the flying animal and returns. Nest hanging from a twig. Flies in flocks.

Cries *tschirr-woouit* twice; and at the same time a trembling movement goes over the wings and the body, chiefly over the wings.

ARTAMUS LEUCORHYNCHUS (L.).

Native Malay name, "Maspas."

Very common at all times and everywhere in Celebes, Minahassa, January to July; Limbotto, July; Makassar, October and January.

Iris brownish; bill bluish; feet bluish grey; claws blackish.

Sits in flocks of ten and more together. Satiated they play, fly from tree to tree, soar in the air, &c. At Makassar once a specimen allowed me to approach quite near. Other habits and cry like those of *A. monachus*.

LANIUS MAGNIROSTRIS, Less.

I got a young specimen of this bird in March near Menado, but did not see it again in Celebes. The genus *Lanius* was then unknown in Celebes, so far as I am aware; and this fact proves that we are not yet able to point out sufficiently what genera are absent and what are not, as still more genera, unknown at present in that island, will probably be discovered.

GRAUCALUS LEUCOPYGIUS, Bp.

Native Malay name, "Burong-minia."

Menado, March and April; Togian Islands, August.

Iris brownish black; bill, feet, and claws black.

Feeds on ants, larvae, &c.

GRAUCALUS TEMMINCKI, Müller.

I only procured four specimens near Kakas, in the mountains of the Minahassa (about 2000 feet high), and never met with the bird again.

*VOLVOCIVORA MORIO* (Müller).

I only got a few specimens in the Minahassa, and am of opinion that the bird is not common during the months which I spent there.

*CRINIGER AUREUS*, Walden.

I discovered this bird (which was described by Lord Tweeddale in *Ann. & Mag. Nat. Hist.* 4th ser. vol. ix. 1872, p. 400) on the chief island of the Togian group, on its highest summit, about 6000 feet above the sea, in August 1871. A *Criniger* from Celebes itself is not yet known; but I do not doubt that the form exists there.

Iris reddish yellow; feet grey; claws and bill black.

Feeds on fruits.

*LALAGE DOMINICA* (Müller).

This species was procured by me near Makassar in January and October, and at Batubassi in November (in April on Cebu, Philippines). The specimens show no trace of white on back and uropygium. The white superciliary stripe is nearly absent.

Iris brownish; feet bluish grey; claws blackish; bill black.

*LALAGE LEUCOPYGIALIS*, Walden.

Minahassa, January to July; Gorontalo, Limbotto, July.

A common bird. It appears to represent *L. dominica* in North Celebes; but we do not yet know the limits of the range of the two species. At all events it is remarkable that the North-Celebean form differs from the South-Celebean, as well as from the Philippine one, which two are alike. The white supercilium is broader in the Philippine specimens than in those from North Celebes.

A very active bird; in flocks; its call is a protracted whistle or a loud chirping cry.

(*Lalage aurea* was never procured by me in Celebes.)

*ARTAMIDES BICOLOR* (Temm.).

I only got one young specimen in July near Limbotto, and an old one on the Togian Islands in August. Mr. Sharpe has said something about the first in his paper in the *Mitth. a. d. k. zool. Mus. Dresden*, iii. 1878.

DICRURUS LEUCOPS, Wall.

Native Malay name, "Burong-gunting," *i. e.* "Scissor-bird," on account of the shape of its tail.

Minahassa, January to July; Limbotto, July; Togian Islands, August; Tanette, September; Makassar, October.

Iris white; feet, claws, and bill black.

Feeds on insects (grasshoppers &c.). Whistles much in very different ways. One bird often makes such a noise in the morning that the whole forest appears to be full of various birds. It often deceived me in this way.

DICRURUS, sp.

It was reported to me that in the mountainous districts of South Celebes there exists a *Dicrurus* with the outer tail-feathers lengthened and broadly webbed (like species of the genus *Dissemurus*).

ANTHREPTES CELEBENSIS, Shelley (*malaccensis*, Scop.).

All Nectariniidæ are called by the natives "Burong-tjui."

A common bird in the Minahassa. Togian Islands, August; Limbotto, July. South Celebes: Batubassi, November; Makassar, Tello, January.

Iris red; feet greyish green; claws grey; sole of the foot yellow; bill black. Feeds on insects.

I obtained two specimens from Limbotto which show certain differences in coloration and bill, but probably are nothing more than young females. Mr. Shelley has described them in his monograph of the Cinnyridæ.

CHALCOSTETHA PORPHYROLEMA (Wall.).

Makassar, January.

Iris brown; bill, feet, and claws black.

Chirps on flowering trees, and is very active.

ARACHNECHTHRA FRENATA (Müll.).

A common bird. Minahassa, January to July; Togian Islands, August (here very frequent in the mangrove-bushes near the sea-shore); Batubassi, November.

Chirps very much.

Iris red. Feeds on insects.

NECTAROPHILA GRAYI (Wall.).

Native Malay name, "Burong-tjui-kapala-mas," *i. e.* "Golden-headed."

Rarer than the preceding species. Menado, March; Toghian Islands, August.

Iris red; feet, claws, and bill black. Feeds on insects.

ÆTHOPYGA FLAVOSTRIATA (Wall.).

I only got this bird near Kakas (about 2000 feet) in June.

DICÆUM CELEBICUM, Müll.

A common bird near Menado, from January till July; Makassar, Tello, January.

Iris brown; bill, feet, and claws black. The young bird has a reddish-yellow bill.

PRIONOCHILUS AUREO-LIMBATUS, Wall.

Kakas, June; Limbotto, September.

MYZOMELA CHLOROPTERA, Walden.

Not a rare bird from March till July near Menado.

ZOSTEROPS INTERMEDIA, Wall.

Makassar, Tello, January.

In flocks on brushes and trees. Chirps likes a Sparrow.

Iris yellow; bill grey, bluish below; feet and claws greyish blue.

PADDA ORYZIVORA (L.).

Native Malay name, "Burong-gotollo" ("Burong-galate" in Java). All Ploceidæ are called thus.

Rare at Menado (March), perhaps introduced there; plentiful in South Celebes; Makassar, October; Segeri, September.

MUNIA MOLUCCA (L.).

In large flocks in March, near Menado.

MUNIA JAGORI (Cab.).

In flocks in March, near Menado; Makassar, January.

According to age and sex, varying very much in the intensity of its brown and black colours.

Iris brown; bill bluish; feet and claws light greyish blue.

CORVUS ENCA (Horsf.).

Native Malay name, "Wokka-wokka."

Common bird everywhere in Celebes at all seasons.

STREPTOCITTA TORQUATA (Temm.).

Native Malay name, "Burong-pandita," *i. e.* "Minister's bird," on account of its black body with white ruff.

Very common in North Celebes; Menado, January to July; Limbotto, July.

It is generally seen on dead branches high on trees, and makes scissor-like and balancing movements with its tail.

I cannot convince myself that *Streptocitta caledonica* (Lath.) is a distinct bird from *S. torquata*. The only differences recorded are the yellow colour of the first third of the bill and the greenish hue of the plumage. I could not discover a decided difference as to this hue when I compared last summer the two specimens of *S. caledonica* in the British Museum (which appear to be young individuals with lighter throats) with specimens of *S. torquata*; neither does a specimen of *S. caledonica* in the Bremen Museum (which I discovered last summer, with unknown habitat) differ from one of *S. torquata* from North Celebes (which I forwarded to Dr. Finsch, and which he had the kindness to compare) in any respect, except in the yellow bill; so Dr. Finsch informs me. Besides, I got in Menado a specimen with yellow on the bill (I had this specimen in Europe in my hands, but am sorry to say that I do not know what has become of it); and Dr. Beccari thinks he has seen both species together near Kandari in South Celebes. If, therefore, these small differences do not even coincide with a different geographical range, as was supposed till now, the two birds cannot, in my opinion, be separated specifically. The differences are either due to age or to individual variation.

Nevertheless I do not wish to decide the question now, but shall wait for further specimens from Celebes before making up my mind.

BASILORNIS CELEBENSIS, Temm.

Native Malay name, "Radja-sië," *i. e.* "King of the Siës;"

"Sië" is the name for *Calornis*; it is said to fly in company with a flock of *Calornis neglecta*, a single large bird among many of these smaller ones.

Appears to be rare. Not found at all near Menado during the months which I spent there. Rurukan, May; Limbotto, July.

ACRIDOTHERES CINEREUS, Müll.

I never obtained this bird in the north of Celebes; but near Makassar it is very common.

STURNIA PYRRHOGENYS (Schleg.).

From the Minahassa and the district of Gorontalo; not at all times present.

ENODES ERYTHROPHRYS (Temm.).

Only near Kakas (about 2000 feet), procured by me in June, but abundant there.

CALORNIS NEGLECTA, Walden.

Native Malay name, "Sië." (The Ternate species is called there "Idi-idi.")

The most common bird near Menado, January to July; Limbotto, July. Young males and females with streaked plumage.

Perhaps not to be separated from *C. panayensis* from the Philippines.

#### COLUMBÆ.

As a general remark, I beg to say that most species of the Pigeon tribe in Celebes fly out in the morning from 6 till 9 o'clock, then frequent very dense and shady spots, rest till 4 P.M., and fly again from 4 till 6 P.M. for food. In captivity they sit quietly, devour greedily the food which they can get, but do not show signs of active life.

OSMOTRERON GRISEICAUDA (Gray).

Native Malay name, "Pombo-idiu," *i. e.* "Green Dove." Alfurous name in the Minahassa, "Wungull."

Cry *kuwu, kuwu*, sad and howling. Old folks say to little children who whine that they are just like this bird.

Feeds on fruits, waringin and others. Flies singly, very quickly.

A common bird everywhere and at all times in the Minahassa, in the district of Gorontalo, and in South Celebes.

Iris yellow; feet red; claws grey; bill greenish black.

*PTILOPUS FISCHERI* (Brügg.).

The Leiden Museum has recently received a series of this fine pigeon from South Celebes, but without an exact locality. It recalls in its general appearance *P. cinctus* of Timor.

*LAMPROTRERON FORMOSA* (Gray).

Not so frequent as *Osmotreron griseicauda*.

Bill black; iris yellow; feet coral-red. In the stomach I found waringin fruits.

*IOTRERON MELANOSPILA*, Salvad. (*melanocephala*, Forster).

Native Malay name, "Pombo-idu kapala-itam," *i. e.* "Green Dove with black head."

Cry *häu*, hollow, difficult to imitate. Mostly flies in pairs. Not rare, everywhere to be met with.

Iris yellow; bill greenish yellow; feet cherry-red; claws grey. Feeds on fruits.

My specimens from the Togian Islands (August) appear to differ a little, the head being rather violet than black.

*LEUCOTRERON GULARIS* (Q. & G.).

Native Malay name, "Pombo-sangi," *i. e.* "Dove from Sangi Islands." (A curious name, as this bird appears not to occur on Sangi; perhaps the name is adopted in consequence of its superficial resemblance to *Zonænas radiata* (Q. & G.), which does occur on Sangi.)

Rarer. Menado, May; Gulf of Tomini, August.

*CARPOPHAGA PAULINA*, Temm.

Native Malay name, "Kum-kum-idu" (idu = green).

Everywhere on Celebes.

Iris red.

Very common, in flocks, generally on waringin trees.

Is represented on the Togian Islands by *C. pulchella*, Walden, discovered by myself and described Ann. & Mag. Nat. Hist. ser. 4, xiv. 1874, p. 157.

DUCULA ROSACEA (Temm.).

Kakas (about 2000 feet), June.

MYRISTICIVORA BICOLOR (Scop.).

Native Malay name, "Kum-kum-puti" (puti=white).  
Alfurous name in the Minahassa, "Puntiin" or "Kelau."

A common bird at all times in the Minahassa, at Limbotto in July.

Fly in large flocks, and often so fill a fruit-tree that it looks quite white. They cross the broad sea-arms which separate the different small islands near Menado. Feed on fruits. Nest of twigs; two eggs.

Very shy, and difficult to procure, because they always remain on the highest trees. The young ones show more yellowish tints.

Cry, *wuum*, *wuum*, groaning deeply, so loud as to be heard a mile off.

I had a bird of this species in captivity for several months at Menado. It moved freely in the house, and did not fly away, was quite tame, and ate very much, but mostly sat quietly, and behaved like an animal of which the hemispheres of the brain had been removed.

MYRISTICIVORA LUCTUOSA (Reinw.).

Minahassa, Gorontalo; not rare.

A specimen of a white Fruit-Pigeon from Siao, Sangi Islands, which I procured there, can neither be placed under *M. luctuosa* nor under *M. bicolor*, being intermediate between the two; it has much grey on the primaries and secondaries, and the edges of the outer webs are darker, just as in *M. luctuosa*. Perhaps *M. bicolor* and *M. luctuosa* cannot be kept specifically separate, both occurring together in Celebes. *M. bicolor* also occurs in Ceram, together with *M. melanura*, which fact I record, because the Ceram habitat of *bicolor* is not mentioned in Count Salvadori's monograph of the genus *Myristicivora*.

ZONÆNAS RADIATA (Q. & G.).

I only got this species near Kakas; perhaps it may be called a rare bird.

HEMIPHAGA FORSTENI (Temm.).

Native name, "Taptup."

Not so rare as *Zonænas radiata* (Q. & G.) at Kakas, the only spot where I got *H. forsteni*.

MACROPYGIA ALBICAPILLA, Temm.

Very abundant at all times and everywhere on Celebes—Menado, Kakas, Langowan, Likupang, Isle of Banka (in the north of Likupang), Limbotto, Togian Islands, Posso, South Celebes.

I believe that *M. albicapilla* and *M. macassariensis* cannot be separated specifically, nor even as varieties. The sole difference between these two is said to be the white and brown head; but all intermediate stages can be found, nor are the birds divided geographically. These differences, in my opinion, are due to differences of age and sex.

TURACÆNA MENADENSIS (Q. & G.).

Native Malay name, "Pombo-itam-kapala-puti," *i. e.* "Black Dove with white head." Alfurous name in the Minahassa, "Trawuwu."

Common bird. Menado, January to July; Limbotto, July; Togian Islands, August.

Cry, *kaukau*, very high, as a knock on an empty cask.

Mostly flies alone. Feeds on different fruits, such as *Cap-sicum fastigiatum*, Bl., &c.

Iris red.

REINWARDTÆNA REINWARDTI (Temm.).

Kakas, June.

TURTUR TIGRINA (Temm.).

Native Malay name, "Terkuku."

A very common bird in the Minahassa (Limbotto, July) everywhere near the roads, on the sea-shore, and in the mountains. Flies in pairs; the male sings alongside the female; two eggs; nest of dry twigs; feeds on rice and the like.

This bird was introduced from Java about the year 1835, and has spread rapidly over the country.

PHLOGÆNAS TRISTIGMATA (Temm.).

Gorontalo.

*CHALCOPHAPS INDICA* (L.).

This handsome Ground-Pigeon is not a common bird, and is difficult to get, on account of its shyness and its habits.

Menado, May; Limbotto, July; Togian Islands, August.

Feeds on fruits.

Iris blackish brown; feet cherry-red; claws light grey; bill fiery red.

*GEOPELIA STRIATA* (L.).

Only procured in South Celebes, Segeri, Maros, Makassar; in flocks on the fields, September to November; very common.

*CALÆNAS NICOBARICA* (L.).

This Ground-pigeon is not common in Celebes. I did not procure it; and natives of the Minahassa declared they did not know it. But Hr. van Musschenbroek informs me that he shot two specimens near Bante, between Tanawangko and Amurang; it will be the same on Celebes as on Batchian, where Mr. Wallace records it as rare and shy. I heard that it occurs on the island of Banka, in the north of the Minahassa; but neither could I get it there. On the Sangi Islands it is a common bird.

*GALLUS BANKIVA*, Temm.

Native Malay name, "Ajam-utan," *i. e.* "forest-fowl."

Near Menado, March; Limbotto, July; Togian Islands, August; Posso, August.

Its cry can be immediately distinguished from that of the domestic fowl. The natives like to keep the Jungle-fowl; they catch it with trained domestic fowl. Such a trained-up fowl has the name "Wawansal" in the language of the Alfuros; and to catch Jungle-fowl is called "mawansal." The flesh of the wild fowl is delicate.

In March I found, a few miles from Menado, two eggs on the earth in a small brush, in uninhabited country; they were longer than the eggs of domestic fowl of this region.

*MEGAPODIUS GILBERTI*, Gray.

Native Malay name, "Moleo-kitjil" (kitjil = little).

In the Minahassa this is at all events a rare bird; I only

once (Mareh) got a young individual which, I do not doubt, belongs to this species, the existence of which the natives assured me they were acquainted with. This young one had the head and nape olive-brownish ; mantle, back, uropygium, and wing-coverts irregularly banded with brownish red ; chin yellowish ; throat olive-brownish ; breast and belly somewhat lighter, and shading into red-brown ; wings greyish brown ; bill dark horn-colour ; feet black.

Hr. van Musschenbroek informs me that he got specimens at Tateli, seven miles from Menado.

Frequent on a small island near the mainland of Celebes, off Paguatt (district of Gorontalo), in the Gulf of Tomini (September), whence I procured a series of specimens. The natives told me that it constructs a mound about two feet high, of leaves and bushes, in which the eggs are buried. I got the species also from the Sangi Islands.

MEGACEPHALON MALEO, Temm.

The natives do not call this bird "Maleo," but "Moleo."

I met with it near Kalinaong on the sea-shore (North-east Minahassa) in May, and on the sand-volcano Soputan (about 6000 feet) in June. It occurs nearly everywhere on the sea-shore in North Celebes ; but I did not hear of it in the Gulf of Tomini, where it nevertheless probably also occurs. On the island Siao, Sangi group, it is a common bird ; specimens from there agree with the Celebean ones. The bird is often brought alive to Menado, as well as the eggs.

Casque black ; bill at the base of the upper mandible reddish brown, of the under mandible and the middle of the upper mandible black, point of bill yellowish ; skin of the neck blackish ; round the eyes of a fleshy yellowish colour ; legs bluish black ; feet and claws yellowish. Under surface of plumage an intense salmon-colour, which soon fades away in the cabinet.

I made a trip in a small sailing-vessel from Menado round the north coast, through Limbe Strait, to Kema. On the north coast, in the east of Likupang, before passing into Limbe Strait, on May 8th, 1871, I entered the following notes in my diary :—

"I heard from a fisherman that the chief 'tampat moleo,' *i. e.* the Molco-ground, was then opposite the rock Magugimbong, near "Batu-puti," *i. e.* white-stone. The whole sea-shore would be visited by them; but, as it was early in the east monsoon, the breakers were still high, the shore not yet sufficiently broad and secure, and therefore many had not yet arrived. To the south of the bay of Kalinaong, round a rocky cape, there is a large and fine bay, which enters the country in a square; only a small part of it to the north has a white sandy shore, the rest a glossy black and rather steep shore, but this is backed by a fine forest on a plain, from which the hills gradually rise up to the volcano Klabat. Two small rivers, the Sapiron and the Araren, flow into the sea here. I passed in a small boat, between the rock Magugimbong and the mainland, another rocky cape, and a second smaller bay, the shore of which consists of white sand, where I saw some wild pigs (*Sus celebensis*) searching after fruits. Everywhere the breakers were too high to go ashore. To the south a rocky cape follows again, and a large irregular bay, with black sand, leaving only a white sandy spot to the south-east; this is "Batu puti," where a small rivulet runs into the bay. In the north of this bay there is another small stream called Tiwu; and here alone the less heavy waves permitted me to land. We pulled the boat ashore and were on the black ground, which did not consist of sand in the common term, but of small stones up to the size of a bean, rounded and polished, into which the foot sank to the ankle. I immediately saw unmistakable tracks of Moleo-feet, clear and large, often together with tracks of the tail, which drags on the ground. Following these tracks I soon arrived at some holes. My men dug up several of them to a depth of four feet without getting any eggs. At several spots it could be seen that the birds had begun to dig holes.

I shot two males from a high tree, and saw many more; they came singly or in troops to the shore, and there must have been many of them. The cry is gargling *grrrrrr*, as if coming from the belly. I had often heard it before from specimens in captivity at Menado. I then shot a young crocodile three feet

in length (*Crocodilus biporcatus*), which was busy digging for eggs in a Moleo-hole; and I saw apes (*Cynopithecus niger*) and tracks of the Sapi-utan (*Anoa depressicornis*).

"The Moleo sits with the head drawn in, and looks very pretty with its reddish underparts."

EUDROMIAS GEOFFROYI (Wagl.).

On the Lake of Tondano in June, and on that of Limbotto in July.

ÆGIALITIS PERONI (Temm.).

Limbotto, July.

STREPSILAS INTERPRES (L.).

Menado, March.

HIMANTOPUS LEUCOCEPHALUS, Gould.

Tondano, June; Limbotto, July.

PORPHYRIO INDICUS, Horsf.

Native Malay name, "Rembang."

In large flocks on the lakes in North Celebes. Lake of Lino in April and May; Lake of Tondano, June; Lake of Limbotto, July.

These birds swim well, and run rather than fly. The males fight much together, and are very noisy. The females are smaller and not so blue as the males, the young ones are grey. They make their nest, when the rice ripens, from heaps of the rice-plant, which they bring together and trample down. They lay from three to five eggs, which are spotted with black and red. They feed on fishes, but also damage the rice-fields very much; they eat the tip of the young plant before it has flowered. Their cry is *tet, tet, tet*, very sharp and loud.

The natives believe that if a "Rembang" cries near a village some one is sure to die.

HYDRALECTOR GALLINACEUS (Temm.).

I only met with this species on the Lake of Limbotto, in July, in flocks. Swimming between the green water-plants of the lake, it is a splendid bird, especially when the sun shines on

its brilliant red crest. The Lake of Limbotto is full of water-birds.

Lord Tweeddale says, "Menado (*mus. nostr.*) ;" but I doubt whether it occurs at Menado ; and as no collector's name is mentioned, little value can be attached to the statement. Besides, "Menado" has been often wrongly used for the whole Minahassa.

GALLINULA FRONTATA, Wall.

Native Malay name, "Rembang-kitjil," *i. e.* "small Rembang," *Porphyrio indicus* being the great Rembang.

Lake of Lino in May ; Lake of Tondano, June ; Lake of Limbotto, July.

Concerning the habitat "Menado," the same remarks apply to this as to the preceding species.

ERYTHRA PHŒNICURA (Forsten).

Native Malay name, "Weres." Alfurous name of the Minahassa, "Terwowok" (its cry). (On Java it is called "Ajam-ajaman.")

Menado, April. I had in captivity a living female with two brownish black young ones ; these look much like young Megapodes. Kakas, June.

Generally a male and female go together. They have many of the habits of the fowl, dig in the ground with their feet and search for animals : always live among the reeds on the water, where they also sleep. The mother calls the young ones in the evening ; and they sleep together, even if the latter are already able to search for their food alone. The nest is placed between bushes in pools of water. Cry *wowok*, *terwowok*. Very good to eat.

ORTYGOMETRA CINEREA (Vieillot).

Kakas, June ; Limbotto, July.

HYPOTÆNIDIA PHILIPPENSIS (L.).

Menado, March ; Limbotto, July.

RALLINA ISABELLINA (Temm.).

Menado.

NUMENIUS PHÆOPUS (L.).

Native Malay name, "Lore."

Menado, March ; Menado-tua, April.

Cry beeeeeee.

Assemble at sunset in flocks of hundreds, and are very noisy before they go to rest. They also cry at night on the sea-shore. Have fixed sleeping-grounds on islands, to which they fly in flocks. Run quickly and are very shy. Only to be found on the sea-shore. Feed on crustacea.

Nest on small trees, very simple, of twigs and leaves ; two eggs. Very good to eat.

ACTITIS GLAREOLA (Gm.).

Menado, March ; Limbotto, July.

ACTITIS HYPOLEUCA (L.).

Menado, March ; Limbotto, July ; Togian Islands, August.

TOTANUS GLOTTIS (L.).

Kakas, June ; Limbotto, July.

TOTANUS PULVERULENTUS, Müll.

Menado, March.

TRINGA MINUTA, Leisler.

Limbotto, July.

TRINGA ACUMINATA (Horsf.).

Limbotto, July.

GALLINAGO MEGALA, Swinhoe.

Menado, March.

ARDEA PURPUREA, L.

Very common in North Celebes and in the bay of Tomini.

HERODIAS NIGRIPES (Temm.).

Menado, May ; Kakas, June ; Limbotto, July ; Togian Islands, August.

DEMIEGRETTA SACRA (Gm.).

Menado, March.

NYCTICORAX CALEDONICUS (Gm.).

Menado, March ; Limbotto, July.

BUTORIDES JAVANICUS (Horsf.).

Native Malay name, "Sweko-itam," *i. e.* "Black Heron."  
Alfurous name in the Minahassa, "Rarappera."

Lake of Tondano, June ; Menado, March.

Calls *qua, qua*, like a Crow.

Flies alone. Sits much on a twig over or near the water, bent together, but eagerly looking for food, and suddenly rushing down on a fish or a crab. Also feeds on eggs of freshwater fishes, especially of *Ophiocephalus striatus* (native name, "Kobós"), which is common in the Lake of Tondano ; but often the strong fish attacks the bird, and hinders it from devouring the eggs.

Builds its nest near the water in the reeds.

BUBULCUS COROMANDUS (Bodd.).

Native Malay name, "Sweko-puti," *i. e.* "White Heron."  
Alfurous name in the Minahassa, "Pokok-puti."

Cry *quak*.

Flies in flocks ; sits on bushes near the lakes, close on the level of the water, looking out for crustacea, which it quickly picks up as soon as they come out of the water. Satiated, they fly to pasture-ground, and sit on the backs of horses and cattle, a curious sight. In the evening they assemble and fly in troops to their roosting-places in the reeds. They nest in the reeds, laying two or three eggs.

The young ones have long, coarse, golden-yellow and hair-like feathers.

MELANOPELARGUS EPISCOPUS (Bodd.).

Not rare in the Gulf of Tomini, but rarely goes as far north as Kema, where I got one specimen in May. Another one I procured at the Lake of Limbotto in July, and one on the Togian Islands in August.

QUERQUEDULA CIRCIA (L.).

Limbotto, July. Rather rare.

MARECA GIBBERIFRONS, Müll.

Very common on the lakes of the Minahassa. Lake of Lino, May ; Lake of Limbotto, July, in large flocks.

DENDROCYGNA VAGANS, Eyton.

Lake of Lino in May.

PUFFINUS LEUCOMELAS (Temm.).

Mr. van Musschenbroek informs me that he got a speci-

men of this species between Menado and Kwandang. The species was brought from Morotai by Dr. Bernstein; I got it near Dorey, New Guinea; besides, it is known from Japan.

*PELECANOPUS MEDIUS* (Horsf.).

Straits of Limbe, North-east Celebes, May, in large flocks; where they nest on the isolated rocks in the sea.

I shot a specimen, to which a mate continually returned as it lay on the ground.

*STERNULA MINUTA* (L.).

Straits of Limbe, May.

*PODICEPS MINOR* (Gm.).

Native Malay name, "Maweres." Alfurous name in the Minahassa, "Wangel."

Lake of Lino in May.

These birds swim in large flocks, and are difficult to procure, being very shy. They dive as soon as any one approaches, and only emerge twenty fathoms and more from the spot. Wounded by shooting, they dive, and often stick with the bill close to a water-plant, which they do not let slip till they are dead. Can only fly just over the water. Feed on fishes and crustacea.

*DYSPORUS SULA* (L.).

Hr. van Musschenbroek brought a specimen from the Minahassa.

*PLOTUS MELANOGASTER* (Forster).

River Tumumpat, near Menado, April.

#### APPENDIX.

A List of the Birds collected by myself on the Togian Islands in August 1871.

|                                           |                                        |
|-------------------------------------------|----------------------------------------|
| <i>Cacatua sulphurea</i> (Gm.).           | <i>Haliastur leucosternus</i> , Gould. |
| <i>Prioniturus platurus</i> (Kuhl).       | <i>Spilornis rufipectus</i> , Gould.   |
| <i>Prioniturus flavicans</i> , Cassin.    | <i>Muelleripicus fulvus</i> (Q. & G.). |
| <i>Tanygnathus muelleri</i> (M. & Schl.). | <i>Merops ornatus</i> , Latham.        |
| <i>Trichoglossus ornatus</i> (L.).        | <i>Alcedo asiatica</i> , Sw.           |
| <i>Loriculus quadricolor</i> , Walden.    | <i>Sauropatis sancta</i> (V. & H.).    |

|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Sauropatis chloris ( <i>Bodd.</i> ).           | Arachnechthra frenata ( <i>Müll.</i> ).      |
| Callialcyon rufa ( <i>Wall.</i> ).             | Nectarophila grayi ( <i>Wall.</i> ).         |
| Pelargopsis melanorhyncha<br>( <i>Temm.</i> ). | Dicaeum celebicum, <i>Müll.</i>              |
| Macropteryx wallacii ( <i>Gould.</i> ).        | Munia jagori ( <i>Cab.</i> ).                |
| Cranorrhinus cassidix ( <i>Temm.</i> ).        | Corvus enca ( <i>Horsf.</i> ).               |
| Phœnicophaës calorhynchus<br>( <i>Temm.</i> ). | Streptocitta torquata ( <i>Temm.</i> ).      |
| Eudynamis melanorhyncha, <i>Müll.</i>          | Calornis neglecta, <i>Walden.</i>            |
| Cacomantis lanceolatus, <i>Müll.</i>           | Scissirostrum dubium ( <i>Lath.</i> ).       |
| Pyrhœcentor celebensis ( <i>Q. &amp; G.</i> ). | Osmotreron griseicauda ( <i>Gray.</i> ).     |
| Broderipus celebensis, <i>Walden.</i>          | Iotreron melanospila, <i>Salvad.</i>         |
| Erythropitta celebensis ( <i>Forst.</i> ).     | Carpophaga pulchella, <i>Walden.</i>         |
| Cisticola cursitans ( <i>Frankl.</i> ).        | Macropygia albicapilla, <i>Temm.</i>         |
| Hirundo javanica, <i>Sparrm.</i>               | Turacoena menadensis ( <i>Q. &amp; G.</i> ). |
| Hypothymis puella ( <i>Wall.</i> ).            | Chalcophaps indica ( <i>L.</i> ).            |
| Artamus leucorhynchus ( <i>L.</i> ).           | Gallus bankiva, <i>Temm.</i>                 |
| Graucalus leucopygius, <i>Bp.</i>              | Megapodius gilberti, <i>Gray.</i>            |
| Volvocivora morio ( <i>Müll.</i> ).            | Charadrius fulvus, <i>Gm.</i>                |
| Criniger aureus, <i>Walden.</i>                | Actitis glareola ( <i>Gm.</i> ).             |
| Artamides bicolor ( <i>Temm.</i> ).            | Actitis hypoleuca ( <i>L.</i> ).             |
| Dicrurus leucops, <i>Wallace.</i>              | Ardea purpurea, <i>L.</i>                    |
| Anthreptes celebensis, <i>Shelley.</i>         | Herodias nigripes ( <i>Temm.</i> ).          |
| Chalcostetha porphyrolœma<br>( <i>Wall.</i> ). | Melanopelargus episcopus ( <i>Bodd.</i> ).   |
|                                                | Hydrochelidon leucopareia ( <i>Natt.</i> ).  |
|                                                | Pelecanopus medius ( <i>Horsf.</i> ).        |

There can be no doubt that there are many more species to be discovered on the Togian Islands ; but there can be also no doubt that its avifauna will prove to keep the thoroughly Celebean character which the above list indicates. Nevertheless the avifauna of an island, or island-group, being isolated more or less from a neighbouring mainland, is interesting, whether it offers differences from the avifauna of the mainland or not, because it will permit of conclusions to be drawn as to the migration of birds, as to the former connexion of the two areas or their independence of one another, and so on. Among the fifty-eight species which I collected on the Togian Islands, only two prove to differ from the Celebean forms, viz. *Loriculus quadricolor*, a deviation from *L. stigmatus*, and *Carpophaga pulchella*, which represents *C. paulina*. One species, *Criniger aureus*, is not yet known from Celebes, and perhaps remains still to be discovered there ; for I do not doubt that many more species will still be discovered on Celebes. *Loriculus*

*quadricolor*, *Carpophaga pulchella*, and *Criniger aureus* proved to be new to science, as well as many more species from Celebes itself, a list of which I have given in the 'Journal für Ornithologie' (1873, p. 404), as well as a list of birds not known from Celebes before my sojourn there.

# XI.—Contributions to the Ornithology of Siberia.

By HENRY SEEBOHM.

[Continued from p. 18.]

## TETRAO UROGALLUS, Linn.

The Capercailzie was not nearly so common as the Black Grouse; but I succeeded in obtaining two males and two females. I shot the first female on the 29th of April. In this bird the feathers on the feet extended halfway down the last joint of the toes, within a quarter of an inch of the claws. The second example was shot on the 10th of June; and the feathers on the feet extended only halfway down the first joint of the toes, nearly an inch and a half from the claws. The crops of these birds were full of the spine-like leaves of the cedar and Scotch fir. I saw no trace of *T. urogalloides*.

## TETRAO TETRIX, Linn.

Black Grouse were common during our stay at Koo-ray'-i-ka. They appeared to find abundance of food in the buds of the birch and hazel in the severest weather. It was not an uncommon thing to see half a dozen of them in one tree together. We saw no more of them after passing the limit of forest-growth.

## TETRASTES BONASIA (Linn.).

I shot the first pair of Hazel-Grouse on the 3rd of May, and occasionally picked up a pair afterwards. On the 25th of June I took a nest with eight eggs. These birds were very easy to shoot. When disturbed from the ground they took refuge in a tree, where they allowed themselves to be easily stalked, not appearing to be alarmed at the rattling of my snow-shoes on the hard crust of the snow. The sailors told me they had been common in the autumn, but had disappeared